

**REMARKS**

Claims 1-14 have been cancelled, without prejudice to filing them in a divisional or continuation application. New claims 15-24 have been added.

New claims 15, 16 and 17 correspond to claims 1, 2 and 3 in the Preliminary Amendment but delete the phrase “or an equivalent of said metalloprotease,” and insert therefore specific language corresponding to “equivalents.” Deletion of the language “or an equivalent of said metalloprotease,” is not made to limit the scope of the claims, but is merely for clarification and to avoid overlap. See the definition of “equivalent of the metalloprotease” at page 9, line 20 - page 11, line 7 of the specification.

New claim 18 recites the amino acid sequence of the metalloprotease in terms of sequence homology and is supported by the specification at page 15, line 20 - page 16, line 5.

New claim 19 corresponds to claim 4 in the Preliminary Amendment, but has been made dependent from new claim 18, as well as claims 15-17.

New claims 22, 23 and 24 correspond to claims 7, 12 and 13 in the Preliminary Amendment, but delete the language “or an equivalent of said metalloprotease,” and instead recite the equivalents. The language “or said equivalent” in step a) and “or the equivalent” in step b) includes subject matter corresponding to “equivalents.” Deletion of “or said equivalent” in step a) and “or the equivalent” in step b) is not for limitation of the scope of the claim, but is merely for clarification and to avoid overlap. See the definition of “equivalent of the metalloprotease” at page 9, line 20 - page 11, line 7 of the specification.

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Furthermore, please note that the Preliminary Amendment inadvertently amended the original claims in the specification, rather than those added by Article 19 Amendment, and the new claims are meant to reinstate subject matter of the claims added by Article 19 Amendment.

No new matter is added and entry of the Amendment is requested, respectfully.

#### **Disposition of Claims**

Claims 1-14 are cancelled without prejudice. New claims 15-24 are added.

#### **Information Disclosure Statement**

The Examiner initialed and returned a copy of PTO Form 1449 filed with the Information Disclosure Statement on December 10, 2001. However, the Examiner did not initial the citation to WO 00/53774.

Submitted herewith is a copy of the PTO Form 1449 and another copy of WO 00/53774. The Examiner is requested to initial the citation to WO 00/53774, to indicate consideration thereof.

#### **Election/Restriction**

The Examiner acknowledged applicants' election of Group I in response to the Restriction Requirement. The Examiner indicated that claims 12-13 (new claims 23 and 24) from the Preliminary Amendment, both directed to methods of producing a metalloprotease of the invention, are grouped with Group I, and that claim 14 (no corresponding new claim) directed to a method of treating joint disease, is placed into a new Group VI, as being directed to a method of using the product of Group IV.

**Claim Rejection - 35 U.S.C. § 102(b)**

Claims 1-7 and 12-13 were rejected under 35 U.S.C. § 102(b) as being anticipated by *Kuno et al.* The Examiner asserted that *Kuno et al.* teach an “equivalent” of the metalloprotease of SEQ ID NO:1 of the invention, because the metalloprotease of *Kuno et al.* possesses aggrecanase activity and has homology to the fragments of SEQ ID NO:1. In addition, the Examiner asserted that *Kuno et al.* also teach DNA encoding the metalloprotease, a vector comprising the DNA, a host cell comprising the vector, and a method of producing the polypeptide (referring to pages 556-557).

The new claims recite specific sequences that may have from 1 to 10 amino acid residues substituted, deleted and/or inserted or a metalloprotease having 90% or more sequence homology with SEQ ID NO:1. Furthermore, applicants advise that the sequence of *Kuno et al.* has only 63% homology with amino acids 213-583 of SEQ ID NO:1. Therefore, the rejection is overcome and should be removed.

**Claim Rejections - 35 U.S.C. § 102(e)**

Claims 1-7 and 12-13 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Friddle et al.* The Examiner asserted that *Friddle et al.* teach a metalloprotease that is 100% identical from amino acid residues 20-950 of SEQ ID NO:1, thereby comprising all of the fragments of SEQ ID NO:1 of claims 1-3. Furthermore, the Examiner asserted that *Friddle et al.* teach DNA encoding the metalloprotease, a vector comprising the DNA, a host cell comprising the vector, and a method of producing the polypeptide.

Submitted herewith is a verified English translation of Japanese Patent Application No. 2000-144020, showing that applicants were in possession of the amino acid sequence of residues

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20-950 of SEQ ID NO:1 prior to the September 29, 2000 filing date of *Friddle et al.* See the attached annex.

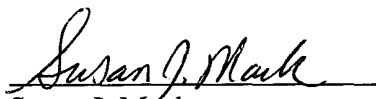
The Japanese Patent Application discloses a full-length sequence (1-950 of SEQ ID NO:1) and also describes processes for producing the metalloprotease, DNA encoding the metalloprotease, a vector comprising the DNA, a host cell comprising the vector, and the polypeptide. This is as much as the Examiner relied upon for the rejection over *Friddle et al.*

Accordingly, applicants were in possession of the subject matter of *Friddle et al.* relied upon by the Examiner prior to the 102(e) date of *Friddle et al.* Thus, the rejection is overcome and should be removed.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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